

THE CHINESE SPECIES OF THE GENUS *ITAGONIA* REITTER (COLEOPTERA, TENEBRIONIDAE, BLAPTINI), WITH DESCRIPTION OF ONE NEW SPECIES

LIU Hao-Yu, REN Guo-Dong*

College of Life Sciences, Hebei University, Baoding 071002, China

Abstract This paper enumerates the species of genus *Itagonia* Reitter from China. A new species *Itagonia baxoia* sp. nov. (China, Xizang), is described, and a key to the Chinese species is provided. Type specimens are deposited in the Museum of Hebei University (MHBU).

Key words Coleoptera, Tenebrionidae, *Itagonia*, new species, China.

The genus *Itagonia* was proposed by Reitter in 1887, with *I. gnaptorinoides* as the type species originally designated. Before this study, 16 species or subspecies have been described with their geographical distribution restricted to the Palearctic Region. Of whose species, 11 were found in China (Reitter, 1887, 1889; Faimaire, 1888; Schuster, 1923; Reinig, 1931; Medvedev, 1998, 2004; Shi & Ren, 2007a, 2007b).

In this paper, we describe a new species, *Itagonia baxoia* sp. nov. from Xizang, China and provide with a key to the Chinese species of this genus. The type specimens are deposited in the Museum of Hebei University (MHBU).

Genus *Itagonia* Reitter, 1887

Itagonia Reitter, 1887: 362; Seidlitz, 1893: 238; Schuster, 1914: 59; Ren & Yu, 1998: 247; Medvedev, 1998: 568; Shi & Ren, 2007a: 33, 2007b: 176.

Type species: *Itagonia gnaptorinoides* Reitter, 1887

Diagnosis. Antennomere VII narrower than VIII.

Upper spur of protibiae larger than lower spur. Upper edge of inner surface of profemora with tooth or strong, somewhat angularly arcuate prominence. Upper spur of female protibiae very large and always larger than that of male, while lower spur very small or almost invisible. Parameres evenly or shallowly arcuately narrowing to apex, sometimes more abruptly narrowing near apex (Medvedev, 2001; Medvedev & Merkl, 2002).

Distribution. China, Tadzhikistan.

Key to the species of the genus *Itagonia* Reitter from China

1. Elytra covered with flattened pustules *I. shamaevi* Medvedev
Elytra without flattened pustules 2
2. Outer margins of epipleura completely visible from above 3
Outer margins of epipleura partly visible from above 7
3. Upper edge of inner surface of profemora with acute tooth 4
Upper edge of inner surface of profemora with obtuse angled or arcuate prominences 5
4. Upper and lower spurs of protibiae subequal in length. Anterior margin of pronotum sinuate, not bordered *I. szetschwana* (Schuster)

Upper spur of protibiae longer than the lower one. Anterior margin of pronotum almost straight, at least bordered on both sides *I. semenowi* Reitter

5. Antennae long, obviously beyond pronotal base. Upper spur of protibiae slightly longer than the lower one *I. longicornis* Shi & Ren
Antennae short, never or at most reaching pronotal base. Upper spur of protibiae distinctly longer than the lower one 6
6. Antennae never reaching pronotal base. Anterior margin of clypeus weakly sinuate. Pronotum widest before middle. Upper edge of inner surface of profemora with massive arcuate prominences near apex. Ventral surface of protarsomeres I and II with hair brushes *I. bisetosa* Medvedev
Antennae almost reaching pronotal base. Anterior margin of clypeus deeply sinuate. Pronotum widest in middle. Upper edge of inner surface of profemora with obtuse angled prominences near apex. Ventral surface of protarsomeres I and II with hair tufts at apices *I. degans* Medvedev
7. Upper edge of inner surface of profemora with obtuse tooth near apex *I. provostii* (Faimaire)
Upper edge of inner surface of profemora with arcuate or obtuse angled prominences near apex 8
8. Upper edge of inner surface of profemora with arcuate prominences. Ventral surface of protarsomeres I - III with hair brushes 9
Upper edge of inner surface of profemora with obtuse angled prominences near apex. Most ventral surface of protarsomeres I - II with hair brushes 10
9. Anterior margin of clypeus shallowly sinuate. Antennae never reaching pronotal base. Anterior margin of pronotum rather deeply sinuate. Outer margins of epipleura visible from above in anterior two-thirds. Ventral surface of mesotarsomere I along with hair brush *I. trisetosa* Medvedev
Anterior margin of clypeus rather deeply sinuate. Antennae almost reaching pronotal base. Anterior margin of pronotum shallowly sinuate. Outer margins of epipleura visible from above in posterior half. Ventral surface of mesotarsomere I with hair tuft at apex *I. mera* Medvedev
10. Antennae short, never reaching pronotal base. Anterior margin of pronotum deeply sinuate, never bordered. Upper edge of inner surface of profemora with obtuse angled prominences near apex. Ventral surface of mesotarsomere I with hair tuft at apex *I. cordiformis* Shi & Ren
Antennae long, reaching pronotal base. Anterior margin of pronotum shallowly sinuate, bordered on both sides. Upper edge of inner surface of profemora with obtuse tooth near apex. Ventral surface of mesotarsomere I along with hair brush 11
11. Pronotum slightly convex, lateral margins obliquely narrowing in basal half. Outer margins of parameres deeply sinuate near the middle.

This work was supported by the National Natural Science Foundation of China (30870322, 30630010).

* Corresponding author, E-mail: giren@hbu.edu.cn

Received 9 Mar. 2009, accepted 16 May 2009.

Metatibiae arcuated upwards. Female metatibiae with inner spur dilated apically *I. zayica* **Shi & Ren**
 Pronotum distinctly convex, lateral margins almost parallel sided in basal half. Outer margins of parameres regularly narrowing towards apex. Metatibiae arcuated downwards. Female metatibiae with inner spur parallel sided *I. baxoica* **sp. nov.**

1 *Itagonia bisetosa* **Medvedev, 1998** (Fig. 1)

Itagonia bisetosa Medvedev, 1998: 568; Shi & Ren, 2007a: 34.

Material examined. None.

Distribution. China (Sichuan).

2 *Itagonia cordiformis* **Shi & Ren, 2007** (Fig. 2)

Itagonia cordiformis Shi & Ren, 2007a: 34.

Material examined. ♂ (holotype), 8 ♂♂, 10 ♀♀ (paratypes), China, Xizang, Markam (29°38'N, 98°41'E; alt. 3 800-4 000 m), 12 June 2004, collected by SHI Ai Min, BA Yr Bin.

Distribution. China (Xizang).

3 *Itagonia elegans* **Medvedev, 1998** (Fig. 3)

Itagonia elegans Medvedev, 1998: 574; Shi & Ren, 2007a: 34.

Material examined. None.

Distribution. China (Sichuan).

4 *Itagonia provostii* (**Fairmaire, 1888**) (Fig. 4)

Platyscelis provostii Fairmaire, 1888: 201.

Oodescelis provostii: Egorov, 2004: 596.

Itagonia provostii: Egorov, 2007: 171.

Itagonia ganglbaueri Schuster, 1914: 58. Egorov, 2007: 171 (syn.).

Material examined. 1 ♂, China, Ningxia, Tongxin, Daluoshan, 2 June 1984, collected by REN Guo Dong; 1 ♀, China, Ningxia, Helanshan, Gunzhongkou, 2 July 1982, collected by REN Guo Dong; 1 ♀, China, Ningxia, Haiyuan County, 15 Oct. 1988, collected by REN Guo Dong; 1 ♂, China, Hebei, Yuxian, Xiaowutaishan, 7 July 2001, collector not indicated.

Distribution. China (Beijing (Type locality), Hebei, Neimenggu, Ningxia).

5 *Itagonia longicornis* **Shi & Ren, 2007** (Fig. 5)

Itagonia longicornis Shi & Ren, 2007b: 176.

Material examined. 1 ♂ (holotype), 1 ♀ (paratype), China, Xizang, Jomda (31°31'N, 98°11'E; alt. 3 650 m), 4 June 2004, collected by SHI Ai Min and BA Yr Bin.

Distribution. China (Xizang).

6 *Itagonia mera* **Medvedev, 1998** (Fig. 6)

Itagonia mera Medvedev, 1998: 572; Shi & Ren, 2007a: 34.

Material examined. None.

Distribution. China (Xizang).

7 *Itagonia semenowi* **Reitter, 1889** (Fig. 7)

Itagonia semenowi Reitter, 1889: 694; Koch, 1965: 128; Gebien, 1937: 843; Ren & Yu, 1999: 248.

Material examined. 8 ♂♂, 9 ♀♀, China, Qinghai, Ulan, Tong Pu, 28 June 1994, collected by

REN Guo Dong; 3 ♂♂, 3 ♀♀, China, Qinghai, Huangyuan, 28 June 1994, by REN Guo Dong.

Distribution. China (Qinghai, Sichuan (Type locality)).

8 *Itagonia shamaevi* **Medvedev, 2004**

Itagonia shamaevi Medvedev, 2004: 168.

Material examined. None.

Distribution. China (Gansu).

9 *Itagonia szetschuwana* (**Schuster, 1923**) (Fig. 8)

Asiloblaps szetschuana Schuster, 1923: 161.

Itagonia szetschuana: Schuster, 1935: 164; Gebien, 1937: 844; Koch, 1965: 128; Shi & Ren, 2007a: 34.

Material examined. None.

Distribution. China (Sichuan).

10 *Itagonia tristosa* **Medvedev, 1998** (Fig. 9)

Itagonia tristosa Medvedev, 1998: 570; Shi & Ren, 2007a: 34.

Material examined. None.

Distribution. China (Sichuan).

11 *Itagonia zayica* **Shi & Ren, 2007** (Fig. 10)

Itagonia zayica Shi & Ren, 2007a: 34, 36.

Material examined. 1 ♂ (holotype), 4 ♀♀ (paratypes), China, Xizang, Zayu, Menkong (28°31'N, 98°19'E; alt. 2 000-2 400 m), 4 July 2005, collected by SHI Ai Min.

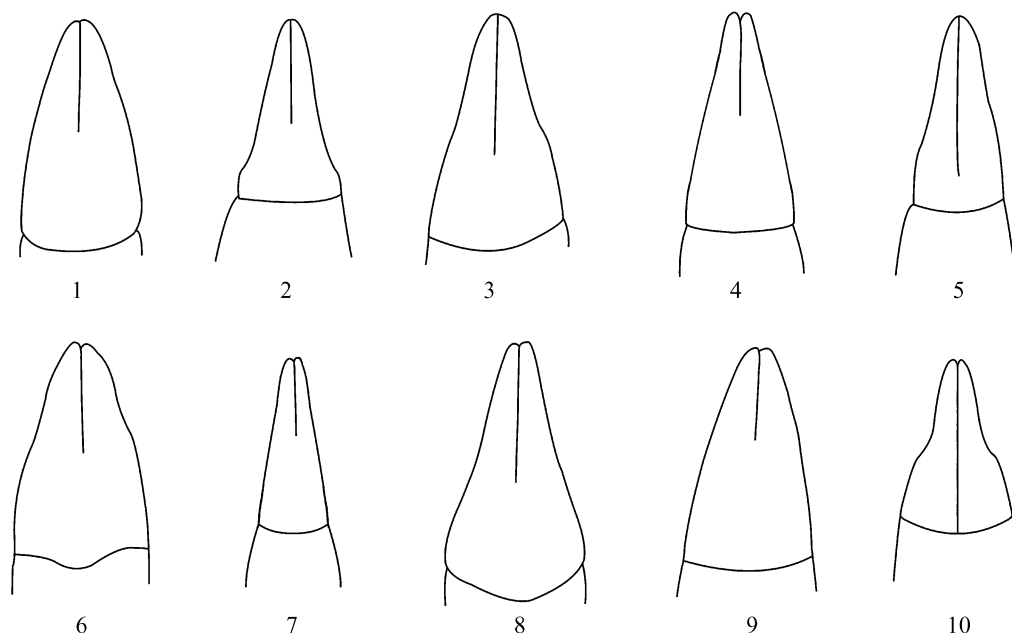
Distribution. China (Xizang).

12 *Itagonia baxoica* **sp. nov.** (Figs. 11-28)

Body elongate oval, black, weakly shining. Male (holotype): length 11.2 mm, width 5.5 mm, pronotum breadth/length ratio ca. 1.29, elytra length/breadth ratio ca. 1.37, length ratio elytra/pronotum ca. 2.44, breadth ratio elytra/pronotum ca. 1.29; female (paratype): length 12.0 mm, width 6.3 mm, pb/pl ca. 1.44, el/eb ca. 1.26, el/pl ca. 2.69, eb/pb ca. 1.36 (on average, $n = 10$).

Male (Fig. 11). Anterior margin of clypeus almost straight. Lateral margin of head with shallow obtuseangled incision above antennal base. Outer margins of genae arcuately converging before eyes. Eyes slightly protruding beyond lateral margin of head. Vertex weakly convex, with densely fine punctures. Frontoclypeal suture weak. Antennae (Fig. 14) long, reaching pronotal base. Length (width) ratio of antennomeres 2 to 11 as follows: 11 (7) : 29 (9) : 13 (8) : 14 (8) : 13 (8) : 16 (9) : 13 (11) : 12 (12) : 11 (12) : 15 (13).

Pronotum slightly transverse, widest in the middle. Ratio of pronotal width at anterior margin to its maximum width and width at base ($n = 10$) 47: 78: 75, on the average. Lateral margins of pronotum weakly arcuately converging to anterior margin in anterior half; almost parallel sided in basal half; bordered along entire length. Anterior margin of pronotum shallowly sinuate and base straight, both bordered laterally. Anterior



Figs 1-10. Apical part of aedeagus in dorsal views. 1. *I. bistosa* Medvedev. 2. *I. cordiformis* Shi & Ren. 3. *I. degans* Medvedev. 4. *I. provostii* (Fairmaire). 5. *I. longicornis* Shi & Ren. 6. *I. mena* Medvedev. 7. *I. semenowi* Reitter. 8. *I. szetschuanica* (Schuster). 9. *I. trisetosa* Medvedev. 10. *I. zayica* Shi & Ren. (1, 3, 6, 8, 9. From Medvedev, 2001)



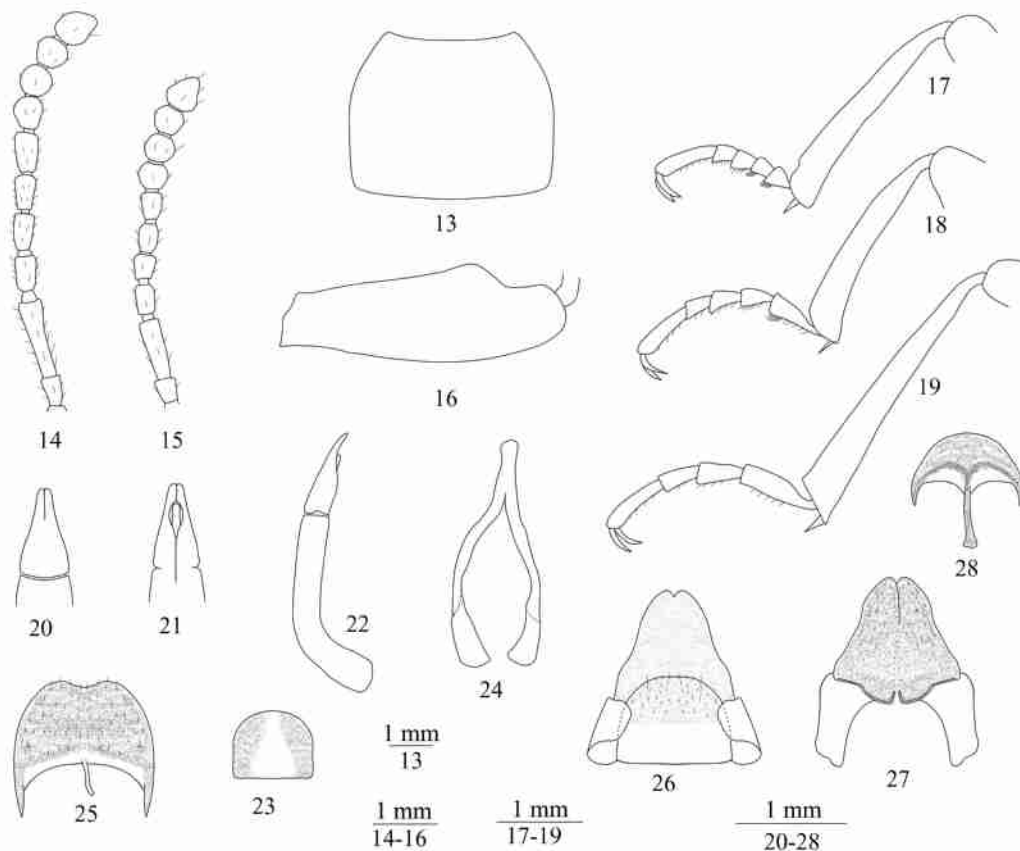
Figs 11-12. *Itagomia baxoica* sp. nov. 11. Male. 12. Female.

angles of pronotum obtuse-angled, rounded apically; posterior ones almost rectangular. Pronotal surface distinctly convex, with dense fine punctures. Propleura with dense fine granules and wrinkles. Prosternum in front of procoxae almost vertical; intercoxal process of prosternum with wide median depression, obliquely sloping behind procoxae.

Elytra elongate-oval, widest in the middle. Less than anterior half and apical part of outer margin of epipleura visible from above. Elytral surface slightly convex, with very fine punctures and wrinkles. Epipleura

reaching apices of elytra, surface with wrinkles and very sparse granules. Visible abdominal sternites with punctures, short setae and wrinkles.

Legs (Figs. 17-19) strong, length (width) ratio of pro-, meso- and metafemora 70 (26) : 78 (16) : 94 (22); that of corresponding tibiae: 69 (9) : 67 (10) : 93 (13). Upper edge of inner surface of profemora (Fig. 16) with obtuse tooth near apex. Protibiae incurved near apical one third, with two pointed spurs at apical margin, the upper one slightly larger than the lower one. Ventral surface of protarsomeres 1 and 2 and



Figs 13-28. *Itagonia baxoica* sp. nov. 13, 14, 16-25. Male. 15, 26-28. Female. 13. Pronotum. 14, 15. Antennae. 16. Profemora. 17-19. Pro-, meso- and meta leg. 20-21. Apical part of aedeagus in dorsal and ventral views. 22. Aedeagus in lateral view. 23. Anal plate. 24. Spiculum gastrale. 25. Abdominal 8th sternite of male. 26-27. Ovipositor in dorsal and ventral views. 28. Spiculum ventrale.

mesotarsomere 1 with small hair brushes. Metatibiae arcuated downwards, gradually widening towards apex. Length (width) ratio of metatarsomeres 1 to 4 as follows: 20 (6) : 12 (5) : 11 (5) : 23 (5).

Aedeagus (Figs. 20-22): length 2.21 mm, width 0.60 mm (when body length 11.3 mm). Parameres 0.81 mm long and 0.43 mm wide, regularly narrowing to apex. Anal plate as in Fig. 23. Spiculum gastrale as in Fig. 24. Apical margin of abdominal sternite 8 sinuate (Fig. 25).

Female (Fig. 12). Body wider. Antennae shorter than in male, not reaching pronotal base when posteriorly extended, length (width) ratio of antennomeres 2 to 11 as follows: 9 (8) : 23 (8) : 11 (7) : 10 (8) : 11 (7) : 10 (8) : 9 (11) : 10 (11) : 10 (11) : 14 (12). Elytra more convex than in male. Upper spur of protibiae much larger than lower spur, but not very massive, and rounded apically. Metatibiae with inner spur rather narrow, never dilated apically. Ovipositor as in Figs. 26-27. Spiculum ventrale as in Fig. 28.

Male body length 10.5-12.2 mm, width 5.1-5.8 mm; female body length 11.0-12.5 mm, width 6.0-6.5 mm.

Holotype ♂, China, Xizang, Baxoi, Gyêda

(29°54' N, 96°21' E, alt. 4 200 m), 14 July 2008, collected by REN Guo Dong. Paratypes: 23 ♂♂, 14 ♀♀, same data as the holotype.

The new species resembles *Itagonia rayica* Shi & Ren, but differs in: the pronotum distinctly convex, lateral margins almost parallel-sided in posterior half; outer margins of parameres regularly narrowing towards apex; metatibiae arcuated downwards; female metatibiae with inner spur parallel-sided, never dilated apically.

Etymology. Named after the type locality, Baxoi.

Acknowledgements We are grateful to NIU Yi-Ping (HBU) for his collaboration in the field trip of the Tibetan Plateau.

REFERENCES

- Egorov, L. V. 2004. On the classification of tenebrionid tribe Platyscelidini (Coleoptera, Tenebrionidae) of the world. *Entomological Review*, 83 (3): 581-613.
- Egorov, L. V. 2007. A new synonym in the tribe Blaptini (Coleoptera, Tenebrionidae). *Entomological Review*, 86 (1): 171-175.
- Löbl, I. and Smetana, A. 2008. Catalogue of Palearctic Coleoptera. Volume 5. Tenebrionidae. Apollo Books, Stenstrup, 231.
- Medvedev, G. S. 1998. New species of tenebrionid beetles of the tribe Blaptini (Coleoptera, Tenebrionidae) from Hissar-Darvaz Mountains and the Plateau of Tibet. *Entomological Review*, 78 (5): 571-597.
- Medvedev, G. S. 2001. Evolution and system of darkling beetles of the tribe Blaptini (Coleoptera, Tenebrionidae). *Chitaniya Pamyati Nikitaya*

Aleksandravicha Khodkovskogo, 53: 1-332.

Medvedev, G. S. 2004. New species of tenebrionids of the tribe Blaptini (Coleoptera, Tenebrionidae) from India, Nepal and China. *Entomological Review*, 83 (1): 163-189.

Medvedev, G. S. and Merkl, O. 2002. *Vihtagona vietnamensis* gen. et sp. n. from Vietnam (Coleoptera, Tenebrionidae, Blaptini). *Acta Zoologica Academiae Scientiarum Hungaricae*, 48 (4): 317-332.

Reinig, W. F. 1931. Entomologische Ergebnisse der Deutsch-Russischen Alai-Pamir Expedition 1928 (II). 5. Coleoptera II. Tenebrionidae. *Mitteilungen aus dem Zoologischen Museum Berlin*, 16, 865-912.

Reitter, E. 1887. Insecta in itinere Cl. N. Przewalskii in Asia Centrali novissime lecta. IX. Tenebrionidae. *Horae Societatis Entomologicae Rossicae*, 21: 355-389.

Reitter, E. 1889. Insecta, a cl. G. N. Putanin in China et in Mongolia novissime lecta. XIII. Tenebrionidae. *Horae Societatis Entomologicae Rossicae*, 23: 678-710.

Ren, G D and Yu, Y-Z 1999. The darkling beetles of Chinese desert and semidesert (Coleoptera, Tenebrionidae). Hebei Publishing House. 247-249.

Schuster, A. 1914. *Itagonia ganglbaueri* nov. spec. (Col., Tenebr.). *Entomologische Mitteilungen*, 3: 58-59.

Schuster, A. 1923. Neue paläarktische Tenebrioniden (Coleopt.). *Wiener Entomologische Zeitung*, 40: 156-162.

Schuster, A. 1935. Die Gattung *Asioblastus*, Fairm. (Col. Tenebr.). *Syllabus*, 4: 161-165.

Shi, A M and Ren, G D 2007a. Two new species of *Itagonia* Reitter (Coleoptera, Tenebrionidae, Blaptini) from Tibet, China. *Zootaxa*, 1483: 33-39.

Shi, A M and Ren, G D 2007b. A new species of *Itagonia* Reitter, 1887 (Coleoptera, Tenebrionidae) from Xizang. *Journal of China West Normal University (Natural Sciences)*, 28 (3): 176-178.

中国齿琵甲属昆虫及一新种记述 (鞘翅目, 拟步甲科, 琵甲族)

刘浩宇 任国栋*
河北大学生命科学学院 保定 071002

摘 要 对中国齿琵甲属 *Itagonia* Reitter 昆虫进行了整理, 并记述中国西藏齿琵甲属 1 新种: 巴宿齿琵甲 *I. baxoica* sp. nov.。列出了该属中国已知种检索表。模式标本保存于河北大学博物馆。

巴宿齿琵甲, 新种 *Itagonia baxoica* sp. nov. (图 11~28)
新种与察隅齿琵甲 *Itagonia ziyia* Shi & Ren 相似, 区别于

关键词 鞘翅目, 拟步甲科, 齿琵甲属, 新种, 中国.
中图分类号 Q969.498.2

后者的主要特征为: 前胸背板背面明显隆起, 侧缘后部两侧几乎平行; 阳茎基侧突侧缘向端部均匀变窄; 后足胫节下弯; 雌性后足内端距端部不扩展, 两侧缘平行。
正模 ♂, 西藏巴宿县吉达乡, 海拔4200m, 2008-07-14, 任国栋采。副模: 23 ♂♂, 14♀♀, 记录同正模。
词源: 种名取自模式标本产地名。

* 通讯作者.